

REMARKS

In the Final Action dated November 20, 2003, Claims 1-14 are pending. Claims 11-12 have been withdrawn from consideration as directed to nonelected species. Therefore, Claims 1-10, and 13-14 are currently under consideration. Claims 1-10 have been rejected under 35 U.S.C. §102(e) as allegedly anticipated by Salfeld et al. (US Patent No. 6,509,015) ("Salfeld et al."). Claims 1-10 and 13-14 have been rejected under 35 U.S.C. 103(a) as allegedly unpatentable over U.S. Patent No. 4,676,982 to Hassig ("Hassig") and U.S. Patent No. 4,477,432 to Hardie ("Hardie").

Applicants, through the undersigned, wish to thank Examiner Roark for the courtesy and assistance provided in connection with a telephonic interview conducted on January 22, 2003.

During the course of interview, the Examiner acknowledged that the rejection of Claims 1-10 under 35 U.S.C. §102(e) in view of Salfeld et al. reference could be removed if Applicants amend the claims to replace the recitation "human immunoglobulin preparation" with "pooled human polyclonal immunoglobulin preparation."

This response addresses each of the Examiner's rejections and objections. Applicants therefore respectfully submit that the present application is in condition for allowance or at least in better condition for appeal. Favorable consideration of all pending claims is therefore respectfully requested.

Claims 1-10 have been rejected under 35 U.S.C. §102(e) as allegedly anticipated by Salfeld et al. Specifically, The Examiner alleges that Salfeld et al. teach human antibodies to hTNF $\alpha$  and the application of these fully human antibodies to methods which benefit from reduction of TNF activity, such as treating ulcerative colitis and Crohn's diseases.

In the first instance, Applicants have amended Claims 1, 4, 9-10 and 13 to replace the recitation of "human immunoglobulin preparation" with "pooled human polyclonal immunoglobulin preparation." Applicants have also added Claim 15. Support for the amendment and new Claim 15 can be found throughout the specification, and particularly on page 6, lines 22-26 and the original Claims 1, 4 and 9-10, for example.

Applicants observe that the human antibodies of Salfeld et al. are antigen (TNF) specific, while the "pooled human polyclonal immunoglobulin preparation" recited in the amended claims of the present invention is polyclonal and non-antigen specific.

Accordingly, Salfeld et al. do not anticipate the present invention. Therefore, the rejection of Claims 1-10 under 35 U.S.C. §102(e) is overcome. Withdrawal thereof is respectfully requested.

Claims 1-10 and 13-14 have been rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Hassig in view of Hardie. Specifically, the Examiner contends that Hardie teaches that oral administration of immunoglobulin for the treatment of intestinal infection was not only possible, but also advantageous. Thus, the Examiner concludes that one skilled in the art would be motivated to apply the Hardie method to the treatment of inflammatory diseases by oral administration of pooled polyvalent immunoglobulin as taught by Hassig.

Applicants observe that Hassig teaches a method of using intravenous administered pooled polyvalent immunoglobulin to treat ulcerative colitis and Crohn's disease, while Hardie teaches that an immunoglobulin preparation administered orally will not lose therapeutic efficacy. Applicants observe that the immunoglobulin preparation in Hardie is employed to treat intestinal infections in infants through opsonic activity of antibodies. Applicants further observe that the opsonic activity of immunoglobulin in Hardie involves

guiding phagocytic cells to ingest and destroy the infection-causing bacteria by coating such bacteria with the immunoglobulin that is recognized by the phagocytic cells. Applicants respectfully direct the Examiner's attention to the fact that, unlike infections, the etiology of inflammatory diseases is unknown. In addition, Applicants observe that the Hassig method itself, i.e., applying immunoglobulin to treat ulcerative colitis and Crohn's disease via intravenous administration, had generated inconsistent results at the time of the present application was filed. See the specification on page 4, line 30 to page 5, line 3, which indicates that "treatment of inflammatory bowel disease (IBD) by intravenous administration of immunoglobulin has been investigated with inconsistent results," citing Levine D.S., et al., 1992 (*Am. J. Gastroenterol.* 87:91-100); Wolf A., et al., 1988 (*Mschr. Kinderheilk* 136:101-103); Knoflach P., et al., 1990 (*Ann. Intern. Med.* 112:385-386); Schmidt, C., 1990 (*Klinikerzt* 19:552-558); and Canva-Delcambre, V. 1996 (*Aliment. Pharmacol. Ther.* 10:721-727). Indeed, one of the objectives of the present invention is to overcome the problems and disadvantages of such methods as those disclosed in Hassig. Moreover, Applicants observe that Hardie is directed to an immunoglobulin preparation administered orally to infants for treating intestinal infections. Thus, even assuming, *pro arguendo*, that the oral administration of an immunoglobulin preparation is advantageous in Hardie, as the Examiner suggests, it is advantageous merely for treating intestinal infections in infants. In this regard, Applicants also wish to direct the Examiner's attention to the fact that unlike newborns and infants, who do not have mature digestive systems that are required to digest proteins, adults have digest systems that can digest proteins including immunoglobulin.

In response, Applicants respectfully submit that it is too remote to be obvious for one skilled in the art to combine the teachings of Hassig and Hardie to the treat IBD. Applicants

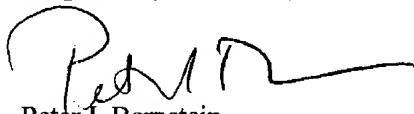
submit that one skilled in the art would not have connected the "opsonic activity" of the IgG in an infant's gut with the anti-inflammatory activity of these same materials when delivered intravenously. Thus, Applicants submit that one skilled in the art, not a novice, would not be motivated to take the purported advantages of Hardie in treating newborn gut infections and then apply them to treating inflammatory diseases (in both adults and infants), of which the etiology is even not known. Furthermore, to achieve any expectation of success, one skilled in the art would have to further combine many other parameters, including the inconsistent results of Hassig. Assuming, based on pure speculation, one skill in the art was motivated to do so, there would be no expectation of success by combining Hassig's inconsistent results in treating inflammatory disease and Hardie's alleged advantages for treating infant gut infection. Notably, it was surprising and unexpected that the present invention discovered that an immunoglobulin preparation is effective from the luminal side of the gut in treating the inflammatory diseases.

Furthermore, Applicants submit that the rejection of claimed subject matter under 35 U.S.C. §103 requires that the suggestion to carry out the claimed invention must be found in the prior art, not in Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 492, 20 U.S.P.Q. 1438, 1442 (Fed. Cir. 1991). It is uncontested that Hassig and Hardie failed to suggest the use claimed methods to treat Inflammatory Bowel Disease by orally administering to a patient an effective amount of a pooled human immunoglobulin preparation. Accordingly, the Examiner's combination of Hassig and Hardie can, at best, only be made with the benefit of hindsight that is derived from the disclosure of the present application. Such hindsight reconstruction is not permitted. *Id.*

Accordingly, it is respectfully submitted that the present invention is non-obvious in view of Hassig and Hardie. Therefore, the rejection of Claims 1-10 under 35 U.S.C. 103(a) is overcome and withdrawal thereof is respectfully requested.

In view of the foregoing amendments and remarks, it is firmly believed that the subject application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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